

18. Elaborate notes on Microbial interactions.
19. Explain in detail about the Sources of Microorganisms in air.
20. Discuss in detail about Water borne diseases.

APRIL/MAY 2024

**CMB52 — AGRICULTURAL AND
ENVIRONMENTAL MICROBIOLOGY**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Explain the importance of nutrients in soil for plant growth.
2. What is soil pH and how can it affect the availability of nutrients for plants?
3. Define the term composting and explain the benefits of using compost in gardens.
4. Explain the role of photosynthesis in the carbon cycle.
5. Explain how the microorganisms in the phyllosphere can benefit a plant and give the example.
6. What are some preventative measures gardeners can take to reduce the risk of bacterial plant diseases?



7. Besides measuring pollutants, what other factors might be considered during air quality assessment?
8. List two common methods used for air sanitation in buildings.
9. Explain why estuaries are considered to be important nursery habitats for many marine species.
10. List two key roles played by microbes in aquatic ecosystems.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss about types of soil.

Or

- (b) Explain about the Microflora of soil.

12. (a) Discuss about the Role of Microorganism in Biogeochemical cycles.

Or

- (b) Analyze and explain the production of Vermicompost.

13. (a) Discuss about the *Fusarium* sp. in plant pathogens.

Or

- (b) Explain about Tobacco mosaic virus.

14. (a) Examine and discuss about the Air sampling techniques.

Or

- (b) Summarize about the airborne diseases.

15. (a) Explain about aquatic microbiology.

Or

- (b) Discuss about primary waste water treatment methods.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Discuss in detail about the physical and chemical properties of soil.
17. Explain in detail about the biopesticides.

